IN THE CLAIMS:

Claim 1 (Currently Amended): A feedforward adaptive non-uniformity compensation processor comprising:

a multiplier receiving a video image and generating a compensated video image by multiplying the video signal by ~~0 or 1~~ one of a noise reducing constant and one; and

a shunting multiplication processor which supplies a selected one of the noise reducing constant and one ~~said 0 or said 1~~ to the multiplier in response to the presence of fixed pattern noise (FPN) or temporal noise (TN) in adjacent frames of the video image.

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Claim 2 (Canceled)

Claim 3 (Original): An adaptive non-uniformity compensation processor comprising:

a subtractor receiving a video image and subtracting a mean value of the video image to thereby generate a de-meaned video image;

a first processor generating a current average frame responsive to the de-meaned video image and a previous averaged frame and generating a value indicative of fixed pattern noise (FPN) from the current and previous averaged frames;

a second processor selectively generating first and second multiplication constants responsive to the value and the previous averaged frame;

a multiplier for multiplying the selected one of the first and second multiplication constants by the de-meaned video image to thereby generate a shunt processed video signal; and

an adder adding the mean value of the video image to the shunt processed video image to thereby generate a compensated video image.

Claim 4 (Original): The adaptive non-uniformity compensation processor as recited in claim 3, wherein the first multiplication constant is zero and the second multiplication constant is one.

Claim 5 (Original): The adaptive non-uniformity compensation processor as recited in claim 3, wherein the second processor compares the value to a predetermined threshold value to thereby cause the lower of the first and second multiplication constants to be output to the multiplier when the value indicates the presence of FPN.

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Claim 6 (Previously Presented): The adaptive non-uniformity compensation processor as recited in claim 3, wherein the second processor compares the previous averaged frame to a predetermined threshold value on a pixel-by-pixel basis to thereby cause the lower of the first and second multiplication constants to be output to the multiplier when the previous averaged frame indicates the presence of temporal noise (TN).

Claim 7 (Original): The adaptive non-uniformity compensation processor as recited in claim 3, wherein the second processor compares the value and the previous averaged frame to respective first and second predetermined threshold values to thereby cause the lower of the first and second multiplication constants to be output to the multiplier when the value indicates the presence of FPN or to thereby cause the lower of the first and second multiplication constants to be output to the multiplier when the previous averaged frame indicates the presence of temporal noise (TN).

Claim 8 (Original): An adaptive non-uniformity compensation processor comprising:

a subtractor receiving a video image and subtracting a mean value of the video image to thereby generate a de-meaned video image;

a first processor generating a current average frame responsive to the de-meaned video image and a previous averaged frame and generating a value indicative of fixed pattern noise (FPN) from the current and previous averaged frames;

a second processor receiving the value and generating an averaged value corresponding to a predetermined number of grouped pixels;

a third processor selectively generating first and second multiplication constants responsive to the value and the averaged value;

a multiplier for multiplying the selected one of the first and second multiplication constants by the de-meaned video image to thereby generate a shunt processed video signal; and

an adder adding the mean value of the video image to the shunt processed video image to thereby generate a compensated video image.

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Claim 9 (Original): The adaptive non-uniformity compensation processor as recited in claim 8, wherein the first multiplication constant is zero and the second multiplication constant is one.

Claim 10 (Original): The adaptive non-uniformity compensation processor as recited in claim 8, wherein the third processor compares the value to a predetermined threshold value on a pixel-by-pixel basis to thereby cause the lower of the first and second multiplication constants to be output to the multiplier when the value indicates the presence of FPN.

Claim 11 (Previously Presented): The adaptive non-uniformity compensation processor as recited in claim 8, wherein the third processor compares the averaged value to a predetermined threshold value on a pixel-by-pixel basis to thereby cause the lower of the first and second multiplication constants to be output to the multiplier when the previous averaged frame indicates the presence of temporal noise (TN).

Claim 12 (Original): The adaptive non-uniformity compensation processor as recited in claim 8, wherein the third processor compares the value and the averaged value to respective first and second predetermined threshold values to thereby cause the lower of the first and second multiplication constants to be output to the multiplier when the value indicates the presence of FPN or to thereby cause the lower of the first and second

multiplication constants to be output to the multiplier when the previous averaged frame indicates the presence of temporal noise (TN).

Claim 13 (Original): An adaptive non-uniformity compensation method for video images comprising:

subtracting a mean value of the video image to thereby generate a de-meaned video image;

generating a current average frame responsive to the de-meaned video image and a previous averaged frame;

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generating a value indicative of fixed pattern noise (FPN) from the current and previous averaged frames;

selecting one of first and second multiplication constants responsive to the value and the previous averaged frame;

multiplying the selected one of the first and second multiplication constants by the de-meaned video image to thereby generate a shunt processed video signal; and

adding the mean value of the video image to the shunt processed video image to thereby generate a compensated video image.

Claim 14 (Original): The adaptive non-uniformity compensation method as recited in claim 13, wherein the first multiplication constant is zero and the second multiplication constant is one.

Claim 15 (Original): The adaptive non-uniformity compensation method as recited in claim 13, wherein the selecting step further comprises comparing the value to a predetermined threshold value to thereby cause the lower of the first and second multiplication constants to be output when the value indicates the presence of FPN.

Claim 16 (Previously Presented): The adaptive non-uniformity compensation method as recited in claim 13, wherein the selecting step further comprises comparing the previous averaged frame to a predetermined threshold value on a pixel-by-pixel basis to

thereby cause the lower of the first and second multiplication constants to be output when the previous averaged frame indicates the presence of temporal noise (TN).

Claim 17 (Original): The adaptive non-uniformity compensation method as recited in claim 13, wherein the selecting step further comprises comparing the value and the previous averaged frame to respective first and second predetermined threshold values to thereby cause the lower of the first and second multiplication constants to be output when the value indicates the presence of FPN or to thereby cause the lower of the first and second multiplication constants to be output when the previous averaged frame indicates the presence of temporal noise (TN).

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Claim 18 (Previously Presented): An adaptive non-uniformity compensation method for video images comprising:

subtracting a mean value of the video image to thereby generate a de-meaned video image;

generating a current average frame responsive to the de-meaned video image and a previous averaged frame;

generating a value indicative of fixed pattern noise (FPN) from the current and previous averaged frames;

generating an averaged value corresponding to a predetermined number of grouped pixels present in the value;

selecting one first and second multiplication constants responsive to the value and the averaged value;

multiplying the selected one of the first and second multiplication constants by the de-meaned video image to thereby generate a shunt processed video signal; and

adding the mean value of the video image to the shunt processed video image to thereby generate a compensated video image.

Claim 19 (Original): The adaptive non-uniformity compensation method as recited in claim 18, wherein the first multiplication constant is zero and the second multiplication constant is one.

Claim 20 (Original): The adaptive non-uniformity compensation method as recited in claim 18, wherein the selecting step further comprises comparing the value and the averaged value to respective first and second predetermined threshold values to thereby cause the lower of the first and second multiplication constants to be output when the value indicates the presence of FPN or to thereby cause the lower of the first and second multiplication constants to be output when the previous averaged frame indicates the presence of temporal noise (TN).

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Claim 21. (Withdrawn): A system for reducing fixed pattern noise (FPN) for use with a focal plane array (FPA) generating a plurality of pixels, said system comprising:

means for coning the output of the FPA to thereby generate a coned output signal;

means for isolating FPN included in the coned output signal on a pixel-by-pixel basis; and

means for feedforward processing the coned output signal on a pixel-by-pixel basis to thereby generate a FPN-reduced output signal

Claim 22. (Withdrawn): A fixed pattern noise (FPN) reduction method for a focal plane array (FPA) generating a plurality of pixels, comprising:

coning the output of the FPA to thereby generate a coned output signal;

isolating FPN included in the coned output signal on a pixel-by-pixel basis; and

feedforward processing the coned output signal on a pixel-by-pixel basis to thereby generate a FPN-reduced output signal.